Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL QUALITY MEASURES CLEARINGHOUSE

General

Title

Use of high-risk medications in the elderly: percentage of patients 66 years of age and older who received at least one high-risk medication.

Source(s)

National Committee for Quality Assurance (NCQA). HEDIS 2015 technical specifications for ACO measurement. Washington (DC): National Committee for Quality Assurance (NCQA); 2014. various p.

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of patients 66 years of age and older who received at least one high-risk medication.

See the related National Quality Measures Clearinghouse (NQMC) summary of the National Committee for Quality Assurance (NCQA) measure Use of high-risk medications in the elderly: percentage of patients 66 years of age and older who received at least two different high-risk medications.

Note from the National Quality Measures Clearinghouse (NQMC): For this measure, there are both Electronic and Hybrid Specifications. This NQMC measure summary is based on the Electronic specification. Refer to the original measure documentation for details pertaining to the Hybrid specification.

Rationale

This patient safety measure addresses medication management to prevent the harms associated with certain medications in the elderly. It identifies high-risk medications that should be avoided in the elderly

population. Certain medications are associated with increased risk of harms from drug side-effects and drug toxicity, and pose a concern for patient safety (McLeod et al., 1997; Murray, 2000; Roose & Spatz, 1999). There is clinical consensus that these drugs pose increased risks in the elderly (Graal & Wolffenbuttel, 1999; Zhan et al., 2001; Fick et al., 2003).

The National Committee for Quality Assurance (NCQA) used the 2012 American Geriatrics Society (AGS) Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults as a clinical foundation for this measure. The development of the 2012 Updated Beers Criteria was based on an extensive literature review and discussion by a panel of experts in geriatric care and pharmacotherapy. The Updated Beers Criteria is intended as a tool that both identifies and describes drugs and drug-disease interactions that should generally be avoided in people 65 years of age and older, because these drugs pose unnecessary risk for older adults (AGS Beers Criteria Update Expert Panel, 2012).

Appropriate use of prescription drugs in the elderly, including proper drug selection, has been identified as an important quality of care issue, and explicit criteria defining inappropriate drug use as an important tool in the evaluation of prescribing to populations (Fick et al., 2003; AGS Beers Criteria Update Expert Panel, 2012). Studies link prescription drug use by the elderly with adverse drug events that contribute to hospitalization, increased length of hospital stay, increased duration of illness, nursing home placement and falls and fractures that are further associated with physical, functional and social decline in the elderly (Fu, Liu, & Christensen, 2004; Bates, 1999).

Reducing prescriptions of high-risk drugs in the elderly also represents an opportunity to reduce the costs associated with the harm from medications (e.g., hospitalizations from drug toxicity) and to encourage clinicians to consider safer, alternative medications. Reducing unnecessary prescribing will also help to reduce cost, given that the elderly population represents one-third of all prescription drug expenditures in the United States (U.S.), but comprises only 13 percent of the population (Families USA, 2000).

Evidence for Rationale

American Geriatrics Society 2012 Beers Criteria Update Expert Panel. American Geriatrics Society updated Beers Criteria for potentially inappropriate medication use in older adults. J Am Geriatr Soc. 2012 Apr;60(4):616-31. [35 references] PubMed

Bates DW. Frequency, consequences and prevention of adverse drug events. J Qual Clin Pract. 1999 Mar;19(1):13-7. PubMed

Families USA. Cost overdose: growth in drug spending for the elderly, 1992-2010. Washington (DC): Families USA; 2000. 2 p.

Fick DM, Cooper JW, Wade WE, Waller JL, Maclean JR, Beers MH. Updating the Beers criteria for potentially inappropriate medication use in older adults: results of a US consensus panel of experts. Arch Intern Med. 2003 Dec 8-22;163(22):2716-24. PubMed

Fu AZ, Liu GG, Christensen DB. Inappropriate medication use and health outcomes in the elderly. J Am Geriatr Soc. 2004 Nov;52(11):1934-9. PubMed

Graal MB, Wolffenbuttel BH. The use of sulphonylureas in the elderly. Drugs Aging. 1999 Dec;15(6):471-81. [74 references] PubMed

McLeod PJ, Huang AR, Tamblyn RM, Gayton DC. Defining inappropriate practices in prescribing for elderly people: a national consensus panel. CMAJ. 1997 Feb 1;156(3):385-91. PubMed

Murray JB. Cardiac disorders and antidepressant medications. J Psychol. 2000 Mar;134(2):162-8. [42

references] PubMed

National Committee for Quality Assurance (NCQA). HEDIS 2015: Healthcare Effectiveness Data and Information Set. Vol. 1, narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2014. various p.

Roose SP, Spatz E. Treatment of depression in patients with heart disease. J Clin Psychiatry. 1999;60 Suppl 2:34-7. [37 references] PubMed

Zhan C, Sangl J, Bierman AS, Miller MR, Friedman B, Wickizer SW, Meyer GS. Potentially inappropriate medication use in the community-dwelling elderly: findings from the 1996 Medical Expenditure Panel Survey. JAMA. 2001 Dec 12;286(22):2823-9. PubMed

Primary Health Components

Medication safety; high-risk medication; elderly

Denominator Description

Patients age 66 years and older as of December 31 of the measurement year

Numerator Description

Patients who received at least one high-risk medication during the measurement year (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

Unspecified

Extent of Measure Testing

All HEDIS measures undergo systematic assessment of face validity with review by measurement advisory panels, expert panels, a formal public comment process and approval by the National Committee for Quality Assurance's (NCQA's) Committee on Performance Measurement and Board of Directors. Once NCQA establishes national benchmarks for accountable care organization (ACO) performance, all measures will undergo formal reliability testing of the performance measure score using beta-binomial statistical analysis. Where applicable, measures also are assessed for construct validity using the Pearson correlation test.

Evidence for Extent of Measure Testing

Rehm B. (Assistant Vice President, Performance Measurement, National Committee for Quality Assurance, Washington, DC). Personal communication. 2015 Apr 8. 1 p.

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Accountable Care Organizations

Ambulatory/Office-based Care

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Multisite Health Care or Public Health Organizations

Statement of Acceptable Minimum Sample Size

Specified

Target Population Age

Age greater than or equal to 66 years

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Health and Well-being of Communities
Making Care Safer
Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Staying Healthy

IOM Domain

Effectiveness

Safety

Data Collection for the Measure

Case Finding Period

The measurement year

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Patient/Individual (Consumer) Characteristic

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions
Patients age 66 years and older as of December 31 of the measurement year

Exclusions

None

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions
Patients who received at least one high-risk medication during the measurement year

A high-risk medication is defined as any of the following:

- A prescription (written or dispensed) for a medication in Table ADAE-A (refer to Table ADAE-A in the original measure documentation for a list of high-risk medications)
- Prescriptions (written or dispensed) that meet days supply criterion within a medication class in Table ADAE-B (refer to Table ADAE-B in the original measure documentation for a list of high-risk medications with days supply criterion)
- A prescription (written or dispensed) that meets the average daily dose criteria in Table ADAE-C (refer to Table ADAE-C in the original measure documentation for a list of high-risk medications with average daily dose criterion)

Note:

Calculating Days Supply: Calculate the days supply during the measurement year for medication classes in Table ADAE-B. The intent is to sum the days supply for all medications (listed in the "Prescription" column) within a medication class (listed in the "Description" column). Sum the days supply and subtract any days supply that extends beyond December 31 of the measurement year. For prescription data, "days supply" begin on the prescription date. Medications dispensed or prescribed in the year prior the measurement year with a days supply that extend into the measurement year must be counted towards the total days supply.
Calculating Average Daily Dose: Calculate the average daily dose for medications in Table ADAE-C. Multiply the quantity of pills dispensed or prescribed by the dose of each pill and divide by days supply.

- To calculate daily dose for elixirs and concentrates, multiply the volume dispensed or prescribed by dose and divide by days supply.
- Do not round when calculating average daily dose.

Exclusions
Unspecified

Numerator Search Strategy

Fixed time period or point in time

Data Source

Administrative clinical data

Electronic health/medical record

Paper medical record

Pharmacy data

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a lower score

Allowance for Patient or Population Factors

not defined yet

Description of Allowance for Patient or Population Factors

The Accountable Care Organization (ACO) aggregate population is reported as a whole, with an option to report Medicaid separately for measures for which HEDIS Health Plan Measurement offers Medicaid specifications.

Standard of Comparison

not defined yet

Identifying Information

Original Title

Use of high-risk medications in the elderly (ADAE): at least one high-risk medication.

Measure Collection Name

HEDIS 2015: Accountable Care Organization (ACO) Collection

Measure Set Name

Effectiveness of Care

Measure Subset Name

Medication Management

Submitter

National Committee for Quality Assurance - Health Care Accreditation Organization

Developer

National Committee for Quality Assurance - Health Care Accreditation Organization

Funding Source(s)

Unspecified

Composition of the Group that Developed the Measure

National Committee for Quality Assurance's (NCQA's) Measurement Advisory Panels (MAPs) are composed of clinical and research experts with an understanding of quality performance measurement in the particular clinical content areas.

Financial Disclosures/Other Potential Conflicts of Interest

In order to fulfill National Committee for Quality Assurance's (NCQA's) mission and vision of improving health care quality through measurement, transparency and accountability, all participants in NCQA's expert panels are required to disclose potential conflicts of interest prior to their participation. The goal of this Conflict Policy is to ensure that decisions which impact development of NCQA's products and services are made as objectively as possible, without improper bias or influence.

Endorser

National Quality Forum - None

NQF Number

not defined yet

Date of Endorsement

2014 Jan 6

Adaptation

This measure was adapted from the *HEDIS Technical Specifications for Health Plans* ("*HEDIS Health Plan Measurement*") and *HEDIS Physician Measurement*.

Date of Most Current Version in NQMC

2014 Nov

Measure Maintenance

Annual

Date of Next Anticipated Revision

Unspecified

Measure Status

This is the current release of the measure.

This measure updates a previous version: National Committee for Quality Assurance (NCQA). HEDIS 2013 technical specifications for ACO measurement. Washington (DC): National Committee for Quality Assurance (NCQA); 2012. various p.

The measure developer reaffirmed the currency of this measure in November 2015.

Measure Availability

Source available for purchase from the National Committee for Quality Measurement (NCQA) Web site .

For more information, contact NCQA at 1100 13th Street, NW, Suite 1000, Washington, DC 20005; Phone: 202-955-3500; Fax: 202-955-3599; Web site: www.ncqa.org .

NQMC Status

This NQMC summary was completed by ECRI Institute on June 12, 2014.

This NQMC summary was updated by ECRI Institute on April 21, 2015.

The information was reaffirmed by the measure developer on November 2, 2015.

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Production

Source(s)

National Committee for Quality Assurance (NCQA). HEDIS 2015 technical specifications for ACO measurement. Washington (DC): National Committee for Quality Assurance (NCQA); 2014. various p.

Disclaimer

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